Remarks

The Office Action dated September 29, 2003 has been received and its contents carefully noted. The following comments are offered on the cited prior art and it is trusted that they will be persuasive in bringing about a favorable reconsideration and allowance of the claims as set forth and amended above.

Claim Rejections 35 USC Section 103

Turning now to the rejections under 35 USC Section 103, claims 1-6, 9-11, 13-17, 19, 21-26 and 28 have been rejected as being obvious in view of Cisar et al. (U.S. Patent No. 5,736,271) when combined with Boyer U.S. Patent Publication No. US2002/0009584. To reject claims 7, 8, 12 and 18, the teachings of Watanabe et al. (U.S. Patent No. 6,492,058) are added to the Cisar-Boyer combination on the grounds of obviousness. In rejecting claims 27 and 28, the examiner alleges that it would be obvious to combine the teachings of Young (U.S. Patent No. 5,622,789) with the Cisar-Boyer combination. Applicants respectfully disagree with these rejections for the following cogent reasons.

The Cisar et al. patent describes a battery pack of the type typical in the prior art as applicants have set forth in the specification, particularly at page 1, lines 18-21 wherein it is described that the typical battery housing incorporates a plastic case or enclosure for holding the

battery cells and other electrical circuity components necessary to build up the complete battery structure. Applicants further describe the prior art at page 1, lines 22-28 that the battery housing is typically preformed and expands all dimensions of width, length and height of the battery package compared to the battery cells contained within and carried by the housing. The Cisar et al. patent discloses such a battery pack (see the figures and column 4, lines 51-67) comprising a elongated battery casing 110 comprising an upper half 112 and a mating lower half 114 wherein the interior region of the battery casing 110 houses a first and second rechargeable battery cell 125, 130 as shown in Fig. 3. The battery cells 125, 130 are circular in cross-section and cylindrical and are positioned and held such that the positive and negative connector plates 126, 131 of the battery cell 125, 130 are sodered to a rear surface of an integrated circuit board, and as illustrated in Figs. 8 and 9, connects the negative end plate 127 of the battery cell 125 and the positive end plate 132 of the battery cell 130 to form an electrical series connection of the cells 125, 130 (column 5, lines 21-31). The battery cells are complete cells in and of themselves and as so connected are placed within the upper half 112 and lower half 114 of the housing in other words, the housing carries the series connected cylindrical battery cells 125, 130. Cisar et al. further requires socket shaped connectors 184, 190 having enlarged end portions which sockets are passed through apertures 168, 170 in the electrical circuit assembly to provide the connection to the assembly and battery cells. The sockets are aligned with apertures 160, 162 in the upper half 118 and lower half 116, respectively, of the battery housing. The sockets receive pins from an electrical device with which it is used and accordingly require precise placement of the apertures with respect to the front face 122 (column 5, lines 64-67). The Cisar et al. battery pack

is enlarged to contain the battery cells 125, 130 and further space within the interior of the elongated battery casing 110 is wasted and does not contribute to a smaller battery pack as done in the present invention. Cisar et al. does not disclose a battery cell assembly having a flat profile construction nor a resin encasing an interface assembly cap comprising an electrical circuit board assembly and the battery cell assembly to seal and hold the battery pack together. Accordingly, the Cisar et al. patent is deficient with respect to limitations found in subparagraphs (a) and (c) of claim 1 of the present application.

Further, Cisar et al. specifies that a plurality of cylindrical shaped cells is required and it defines that two, and only two, cells are used. Cisar et al. further defines the shape of the socket connection to the electrical device and thus limits the design of the battery pack. In contrast, applicants clearly teach away from the use of cylindrical cells due to the excessive additional space required to accommodate the cylindrical cells.

The examiner admits Cisar et al. did not disclose a resin encasing the interface assembly caps and the battery cell assembly and attempts to correct this deficiency by alleging it would be obvious to combine the teachings of Boyer to provide Cisar et al. with a resin encasing the battery cell assembly. Applicants respectfully disagree with the examiner's combination. Boyer does not specify at page 1, paragraph 0024, the particular resin material used but identifies the usage of microcellular foamed material which is diluted with fluid further in the publication. The microcellular foamed material is different than applicants resin which is based on inserting the

resin material in a relatively hot condition, approximately 200 degrees C. The hardening of the resin is based on a cooling down rather than the vaporizing of a solution (fluid) as required in the Boyer application. Further, the microcellular foamed material of Boyer would not encase the interface assembly cap and the battery cell to seal and hold the battery pack together as required in the present invention. Regarding claims 2, 3, 15 and 16, Boyer at paragraph 0029 defines a similar material however, in a later phase, paragraph 0030, Boyer defines that the material is not used alone but is soluted with the fluid. The material thus foamed is very much different from the resin characteristics required to accomplish the resin encasing of the interface assembly cap and the battery cell assembly to seal and hold the battery pack together as required in the present invention. Likewise, independent claims 14 and 22 distinguish over Cisar et al. taken alone or in combination with Boyer for similar reasons as independent claim 1.

Further, Boyer simply teaches a method of encapsulation using a microcellular foamed material which does not address, suggest or provide a teaching of structural integrity for sealing and holding the battery pack together as provided in the present invention. If this were the case, then the combination of the battery housing of Cisar et al. to hold the battery cells 125, 130 would not be required since the microcellular foamed material would provide as argued by the Examiner the necessary battery housing nor is such a combination suggested, taught or disclosed by Cisar et al. or Boyer, taken either singularly or in combination.

The examiner recognizes some of the ineherent deficiencies of Cisar et al. and Boyer and attempts to further correct them by combining bits of Watanabe et al. U.S. Patent No. 6,492,058. Watanabe et al. discloses that the holder 6 is used to protect the protection circuitry. There is no suggestion or disclosure or teaching in Watanabe et al. that the holder is used to form the shape of the battery pack as for example indicated by the holder 26 in Fig. 1 of applicants' specification.

The examiner combines the teachings of Young U.S. Patent No. 5,622,789 with the Cisar et al. and Boyer combination. As discussed above, the Cisar et al. and Boyer combination taken either singularly or dependently do not anticipate applicants' invention. Young et al. does not cure the fundamental deficiencies of the Cisar et al.-Boyer combination and accordingly, it is submitted that these claims which are dependent upon independent claim 22 are distinguishable over the combination for similar reasons, and further for limitations clearly set forth therein.

Thus, it is not seen how the claimed device can be derived from these prior art references to Cisar et al., Boyer, Watanabe et al. and Young as these prior art references, alone or in combination, simply do not teach or suggest what is set out in applicants' claims and do not provide a basis for developing the invention to persons having ordinary skill in the art to which the subject matter pertains. Accordingly, applicants respectfully submit that the examiner's reliance on these prior art references is not properly grounded and the rejection based thereon should be withdrawn.

In addition to the above, the various applied prior art references offer no teaching which would prompt the artisan of ordinary skill to make the combinations/modifications proposed by the Examiner. In fact, it is only when the Examiner looks to applicants' own disclosure that he can allege obviousness by choosing bits and pieces of the prior art references and then combining these bits and pieces together based on alleged obviousness. Without a teaching (other than applicants' own teaching) to prompt the combinations/modifications, the rejections are merely improper hindsight reconstruction of applicants' own invention using applicants' own disclosure. The Court of Appeals for the Federal Circuit has steadfastly criticized such modification. "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). See also, e.g., In re Laskowski, 871 F.2d 115, 10 USPQ 2d 1397 (Fed. Cir. 1989); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985); In re Grabiak, 769 F.2d 729, 731, 226 USPQ 870, 872 (Fed. Cir. 1985); In re Sernaker, 701 F.2d 989, 994, 217 USPQ 1, 5 (Fed. Cir. 1983).

Accordingly, it is submitted that the present invention as claimed is readily distinguishable from the prior art references for the reasons indicated. Applicants' invention is not disclosed by any of the prior art and there is no fair basis for alleging that applicants' invention is obvious in regard to such prior art. If the invention was obvious, it would have been adopted before in view of its advantages.

In sum, it is submitted that the present invention as claimed is readily distinguishable from the applied references for the reasons indicated. Applicants' invention is not disclosed by the applied references and there is no fair basis for alleging that applicants' invention is obvious in regard to them. If the invention was obvious, it would have been adopted before in view of its advantages.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims are allowable and early favorable action is earnestly solicited. The Examiner is invited to call applicants' attorney if any questions remain following review of this response.

Respectfully submitted,

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By Jack M Pasquale

Jack M. Pasquale
Attorney for Applicants
Registration No. 31,052
WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
Bradford Green, Building Five
755 Main Street, P.O. Box 224
Monroe, Connecticut 06468
Telephone: (203) 261-1234
Facsimile: (203) 261-5676